

A NEW *BULBOPHYLLUM* (ORCHIDACEAE)
SPECIES FROM THE CRATER MOUNTAIN
AREA IN PAPUA NEW GUINEA

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ABSTRACT

A new species *Bulbophyllum wakoi*, section *Brachystele* Schltr., collected from the Crater Mountain Wild Life Management Area in Papua New Guinea is described. It resembles *B. foetidum* Schltr. and its variety *B. foetidum* var. *grandiflorum* J.J. Smith. However, it differs from these in the size and the shape of the sepals, petals, labellum, and column arms.

ABSTRACT (MELANESIAN TOK PISIN)

Niupela kain orchid *Bulbophyllum wakoi*, sekson *Brachystele* Schltr., ol bin kisim long Creta Mauntein Wail Laif Management Eria insait long Papua New Guinea em ol bin diskraibim. Em i wankain long *B. foetidum* Schltr. na wantaim variety *B. foetidum* var. *grandiflorum* J.J. Smith. Dispela em minim olsem long dispela insait long sais na seip long sepals, petals, labellum, na colum ams.

INTRODUCTION

The section *Brachystele* Schltr. in New Guinea comprises about three taxa. These are *B. foetidum* Schltr., *B. foetidum* Schltr. var. *grandiflorum* J.J. Sm. and *B. pachyanthum* Schltr. The Crater Mountain species is closely related to *B. foetidum* Schltr., to which it has been compared with, but differs in size and shape of the floral parts and more specifically in the some features of the column and the labellum. The newly recognised taxon is described here.

***Bulbophyllum wakoi* Howcroft, sp. nov. (Fig. 1). TYPUS: PAPUA NEW GUINEA.**

SIMBU PROVINCE: Ex Herowana, Crater Mountain Wildlife Management Area, S. *Wako* 105, 10 Apr 1995 (HOLOTYPE: LAE 79035).

Species nova affinis *B. foetidum* Schltr., et *B. foetidum* var. *grandiflorum* J.J. Smith sed floribus majoribus, sepalis et petalis latoribus, labello non oblongo sed cordato et majoribus, brachiis spatulatis et majoribus.

Epiphytic, the creeping and branching habit typical of the section. *Pseudobulbs* ca. 3–4 cm x 1.4 cm, oblong, transversely elliptic, slightly flattened. *Leaves* petio- late, the petiole semi-conduplicate. *Inflorescence* 33 cm or more long, 9 or more flowers; *rachis* short, 2.5 cm long, glabrous, nodding; *peduncle* more than 31 cm long, 0.59 cm in diameter, sheaths more than 4, glabrous, tubular; *floral bracts* ovate to oblong-ovate, 2.7 cm long, 1.2 cm wide, concave, acute, glabrous. *Flowers* positioned in all directions, more or less patent, very large,

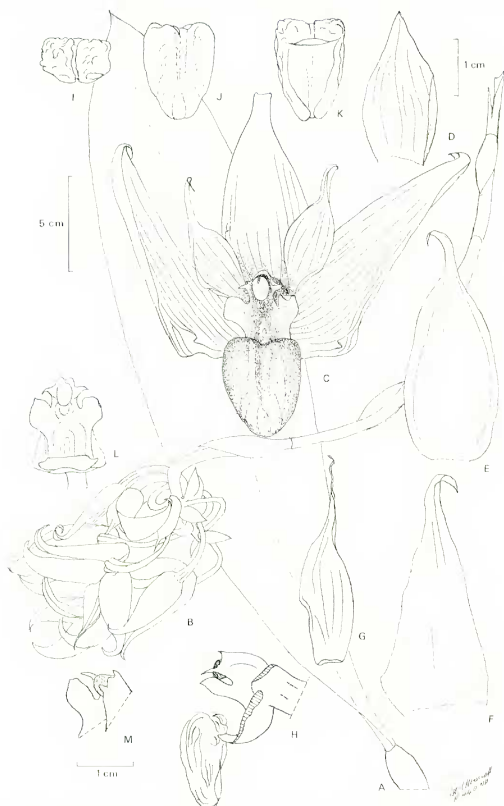


FIG. 1. *Bulbophyllum wakoi*. A. Leaf and apex of pseudobulb. B. Inflorescence, 5 cm scale. C. Flower. D-G. Floral bract, dorsal sepal, lateral sepal, petal, 1 cm scale. H. Column and labellum, lateral view. I-K. Labellum back, dorsal and ventral views, 1 cm scale. L-M. Column, ventral and lateral view.

moderately to wide opening; *dorsal sepal* ovate, 4.3 cm long, 1.6 cm wide, glabrous, tip acuminate, semi-conduplicate slightly recurved; *lateral sepals* free, obliquely triangular 5.0 cm long, 2.1 cm wide; glabrous, lower basal margin obliquely triangular or lobed, tip acuminate, semi-conduplicate; *petals* ovate-lanceolate to elliptic, slightly concave, glabrous, 3.7 cm long, 1.1 cm wide, tip long acuminate; *labellum* mobile, thick, fleshy, in general outline cordiform or broadly ovate, 1.8 cm long, 1.2 cm wide near base, apex blunt but ventrally bilobed, convex above with a longitudinal groove producing 2 slight longitudinal ridge and terminating in a mildly raised cushion at apex, margin slightly papillose; adaxial side slightly concave with an inconspicuous median ridge; *column* dorsally slightly curved, from ovary to tip of stolid 1.2 cm long, to tip of rostellum 1.0 cm long; *dorsal stolid* short and blunt, *stolids* on lower margin conspicuous, subulate; *basal arms* of column porrect, equal in length to stolid, spatulate, from column foot ca. 1.0 cm long, ca. 0.5 cm broad; *column foot* at the right angles to column, ca. 1.0 cm long curved towards base, broad, quadrangular, truncate ca. 1.0 cm wide, with a lateral falcate lobe, internal face longitudinally convexed with a raised ridge; *anther* hooded; *stigma* more or less quadrangular; *ovary* ca. 1.0 cm long, glabrous; *pedicel* ca. 4.0 cm long, glabrous; *pollen* not seen; *fruit* not seen.

Distribution.—Papua New Guinea. Herowana area in the Crater Mountain wild life management area, Simbu Province.

Habitat.—Upper montane rainforest zone. No records accompanied the holotype specimen, but all the New Guinea species come from areas with rainfalls between 2,000–4,000 mm per annum. Species of this section *Brachystele* are found growing in the thick root and leaf litter of rainforests and as epiphytes climbing the trunks of trees. Information on altitude was not available but Herowana is located at 850 m altitude and Crater Mountain rises to 2100m. The most likely altitude for this species is around 1,500 m.

This new species is a closely allied to *B. foetidum* Schltr. (Fig. 2) including *B. foetidum* var. *grandiflorum* J.J.Sm., but has larger flowers, wider sepals and petals; the labellum is not oblong but is cordate and larger; arms of column are spatulate and larger. The most important differences between *B. wakoi* and *B. foetidum* lie in the shape of the labellum (Figs. 1 C, I, J and Figs. 2 B, H–J) and the differences in the size, shape and posture of the basal arms of the column (Figs. 1 H, L and Figs. 2 E, M, N, L; Figs. 2 M and L represent two specimens from different locations).

The illustration of *B. foetidum* by Schlechter (1913) and Smith's illustration of variety *grandiflorum* (1929) compare fairly well with Figure 2, but the differences between the basal arms of the column, in length and shape, in both illustrations, do not fit that of *B. wakoi*. Smith's variety was also described as having pustules on the rachis. These are not present in the new species.

Bulbophyllum foetidum, as the name suggests, produces a foul odor. When

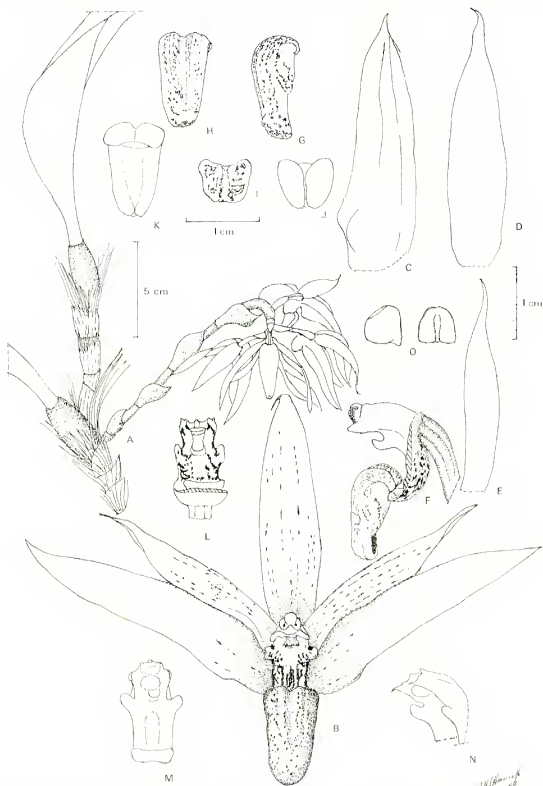


Fig. 2. *Bulbophyllum foetidum*. A. Habit, 5 cm scale. B. Flower. C-E. Lateral sepal, dorsal sepal, petal, 1 cm scale. F. Column and labellum, lateral view. G-H. Labellum, lateral and dorsal views. I-J. Labellum, back view of two specimens. L-M. Column, ventral view of Omsis and Morobe patrol post specimens. N. Column, 1 cm scale. O. Anther cap, lateral and front views (left to right).

extracting the specimen of *B. wakoi* from the alcohol, in which it has been preserved, it was noted that the alcohol gave off a fairly strong foul odor as well. Since the production of a foul odor is common with other members of this section, it is presumed that the new species does the same.

Etymology.—The new species has been named for Mr. Simon Wako who collected and submitted the specimen to me—along with many other specimens—for identification. Mr. Wako comes from Crater Mountain area where he and others from that area are involved with the Wild Life Management project there.

Notes.—Only spirit material of the new species was available and the illustration of *B. wakoi* (Fig. 1) was drawn from this material. Based on color photos provided by Mr. Wako and Crater Mountain Project staff, and by Dr. Geoff Stocker of a flowering specimen in his private collection, the petals and sepal are glossy olive-green with purple to maroon veins and deep purple to maroon at their base; externally they are darker, almost glossy brown in color. The labellum is deep glossy red with the two dorsal ridges paler, almost pink. The column is dorsally white to pink with some red lines near its base and ventrally deep red. The anther is red and the pedicel and ovary are green. The new species differs from *B. foetidum*, in the color and color patterns of the sepals, petals, and column. The pedicel and ovary of the latter species is purple black with white spots whilst that of the *B. wakoi* is green.

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